TO STUDY SHIPS BY MODEL.

CORNELL'S NEW TANK FOR EXPERIMENT WORK.

Problems Which Have Puzzled Naval Architects and Constructors to Be Studied by the Performance of Miniature Ships—Results Will Be Made Public—Models of War.

Civil engineers all over the world have been expectantly watching the completion of the new marine testing tank in the hydraulic laboratory in Cornell University, because through it they expect to find out some of the engineering secrets which the United States and other Governments have been hoarding up for several years.

The various Governments have been carrying on a series of experiments on war vessels in their model testing tanks, and, it is said, invaluable data have been secured. But the information so obtained has been guarded zealously. If a new fact is discovered, it is put under the seal of the strong box, and is not to be used except in urgent need, as, for instance, in case of war, each Government thus expecting to be just so far ahead of its neighbors at the critical moment. This is one reason why a war between the United States and Spain is of such interest to the naval engineers of neutral nations. But this new tank at Cornell will change the condition of affairs somewhat, inasmuch as every fact ascertained will be given at once to the world at large to be used for what it is worth.

In these Government testing tanks models of war vessels are operated with intricate machinery and experiments are made to determine means for increasing the speed; to discover ways of reducing water resistance; to determine power using capacity; to find out how to increase coaling capacity and other things of a like nature, which in case of war might have great importance. The United States tank is about completed; it will be the largest in the world. There are two in Great Britain, one belonging to the British Government in Portsmouth and one belonging to a shipbuilding firm in Dumbarton, Scotland. Italy owns a tank, and so does Russia. The French and Germans, however, have carried on their operations in flooded dry docks, though the findings have been kept secret just the same.

Generally speaking, these tanks are all alike in construction, and the same kind of apparatus is employed on all of them. They range in size from 350 to 500 feet long by 20 to 30 feet in width and 10 to 15 feet in depth. The United States tank is 500 feet long by 50 feet wide. It is 14 feet deep. The Cornell tank is 350 feet long, 16 feet wide and 10 feet deep. Water of various depths may be had in these tanks, and it can be calm or made to run rapidly through them at the will of the operator.

The value of the tanks is almost incalculable. Had the United States Government possessed one years ago it might have saved thousands of dollars in the construction of its crack cruisers and battleships. Probably $3,000,000 were spent in premiums by the Government during the early days of the present navy. As Prof. Durand of Cornell points out, the commercial value of the expenditure as an incentive to builders is not to be denied, but much money might have been saved and the great results already achieved might have been much improved if a tank had been operated in those days. After the Italian war vessels Duilio and Dandolo were built and placed in commission it was found that very slight changes of model would have allowed the battleships to attain the same speed with an expenditure of very much less power, the difference costing more Italian money than would have equipped an entire experimental station. The head of a leading shipbuilding firm says that he was able to guarantee a speed of 20.5 knots (one knot in excess of that already attained) simply because of some model tank experiments. The vessels ran between Dover and Ostend and went ahead of the expectations of their builder by making 21 knots an hour. He stated that he could have allowed the boats to maintain the old speed of 19.5 knots by saving nearly 1,000 horse-power. It is information of this nature that has been ascertained in the various tanks, and that is expected to be learned from the Cornell tank by engineers.

The Cornell tank is like the others in equipment, so that a description of its apparatus will cover that of all. The tank in Ithaca has a trolley car structure extending across it which is capable of being propelled electrically from one end of the tank to the other at any speed. This is for the purpose of testing the speed, thrust, and area of propellers. It is used also in connection with the determination of the shape of vessels' hulls. This structure is the most interesting part of the tank equipment. It is supplied with delicate testing instruments and is in its way a moving laboratory. The operator rides upon it as it moves along the tank, dragging after it the model of a man-of-war in the water, or a special apparatus carrying various small propellers. The operator can work the structure by means of switches in circuit with the electric motors. If the model of a boat is being tested it is placed in the water under the trolley structure and drawn forward by a vertical metal rod, which extends up through the structure and is attached by a pivot. The upper end of the rod impinges upon a recording mechanism. When the water in resisting the forward motion of the boat causes the model to sag backward, the upper or free end of the rod leans forward and records the resistance down below.

The general slope of the hulls of vessels is due to the theories of shipbuilders, who heretofore have been compelled to prove the truth of their assumptions by building large ships and giving the matter commercial tests. One builder tried to equip himself beforehand by arranging a small tank through which water was caused to run very rapidly. In the tank he placed the model of a vessel, which was secured to the upstream end of the tank by a small spring dynamometer. The rushing water caused the small boat to pull hard on the recording instrument. The builder chipped away on the hull of that model boat until he had reduced the strain in every possible way. When he had reduced it to a minimum he proceeded to build a full-sized craft on the same lines which the model had finally assumed, and the result really justified his trouble, for the new vessel was very fast.

The Cornell method of shaping and testing models is a great improvement on this builder's device. The newly drawn "lines" of the proposed boat are laid down on paper, which is secured in an especially constructed apparatus made somewhat like an elaborate pantograph. A huge block of paraffine is prepared as near the shape of the proposed model as it is possible to get it. This block is placed on the bed of the model forming machine. The block moves forward and backward under rapidly revolving cutters. The cutters are connected with a pointer. The designer moves the pointer along the lines he has laid down on his plan, and the cutters below cut a corresponding swath out of the block of wax. In this manner the various water lines are accurately made on the block, and after the block has been polished it is ready to be tested.

When the model is tested in the water, if it is found that the newly planned boat offers too much resistance to the water in any of its parts, the offending part is reshaped until the resistance is reduced. This can be very easily done by means of cutting tools. Thus it will be seen that an almost infinite number of experiments can be made at a very slight cost and in a very short time, whereas if the models were made of wood much time would be lost and much expense would be incurred in reshaping them. It is probable that this method of constructing models and determining their various characteristics will result in the building of some very fast pleasure yachts and other vessels of a more commercial nature.

The trolley structure to be used on this tank will enable its operators to make some very valuable experiments upon the shape and the action of screw propellers. There seems to be a dearth of information in the line of propeller performance. Several private firms have made experiments concerning the shape and size of propellers, but the data obtained have not been sufficiently specialized to result in any radical improvement over heretofore existing styles. Prof. Durand and his assistants in Cornell have been carrying on a series of experiments with propellers on Cayuga Lake. They rigged up a steam launch with a false bow which was designed to carry a small propeller down in the water ahead of the boat. As the boat steamed forward the little propeller ahead of it was forced to revolve. As it was connected with delicate measuring instruments the character of its performance could be determined accurately by those on board the boat. Attached to this small propeller was a belt rope which connected with an instrument known as a tachometer, which measured its revolutions. A clock with a second's break indicated the speed of the apparatus forward through the water. The apparatus was tried over a course 1,000 feet long. The course was divided into ten parts of 100 feet each. Various kinds of propellers were tried, some having long and narrow blades, some having short and thick blades, some with four blades and others with three. These experiments are still being carried on, and the general results, when plotted, will be very valuable to marine engineers.

But, after all, these efforts are in a measure crude, because the medium which carried the propellers through the water was itself somewhat influenced by the resistance of the water and also by the resistance of the propeller in front. The trolley truck, however, proceeding along the newly made tank, will not be influenced in the least by the performance of the apparatus beneath it. Furthermore, some experiments will now be possible which were not possible with the boat. For instance, there is always a certain amount of interaction between a ship and her propeller, and the resistance of this combination is quite different from the simple resistance that is generated by the forward motion of the boat through the water.

This interaction will be studied by means of propellers inserted in the water just behind the model, but not connected directly therewith. For determining the resistance of a model boat and her propeller, there will be a special trolley truck capable of carrying forward the model, and provided with means for running the propeller steadily at any speed. This truck will also be provided with means for measuring the thrust developed by the propeller, as well as the power required to run it. These facts will be recorded on a drum, so that a record may be made of the performance of the propeller as well as the resistance of the ship. The models are usually tried at various speeds and at various depths of immersion, which are varied by adding or subtracting ballast. They are also tried at two or more sets of trims, or sidewise inclinations, such as would naturally be assumed by a vessel when pitching and rolling through heavy waves.

It is the desire of the Cornell professors to make experiments which will be more in the line of pure science than in the line of commercial science. The idea is to establish a set of general rules or laws which can be used by constructors whose efforts are entirely commercial. Their idea is to point out exactly what every kind of propeller will do, what every shape of boat will do under varying conditions, how much power would be needed to propel certain boats at certain speeds, and the limitations which would govern these performances. These facts are to be ascertained merely for the benefit of science; then if the various governments or shipbuilders desire to take advantage of them and so construct very fast vessels, or vessels using minimum amounts of power with maximum freighting capacity, they may do so. The remarks of Prof. Durand on this subject explain the condition of marine engineering problems. He says:

"Our idea is that marine engineering, like all other branches of engineering, must have a scientific basis. There has been in this country very little work in this line of a scientific character; that is, dissociated with the solution of a commercial problem. For instance, in the design of a proposed ship, there is, underlying all, a fundamental field of problems in which the conditions relate not to one problem, but to the whole field. My work has not been devoted to the design of any one propeller or to any commercial problem, but to ascertaining certain facts in order to furnish them to the profession at large and leave it to the practicing engineer to exercise his own judgment from experience in the use of such data as to putting them into application. He is the one who must judge how far this matter is applicable to his particular use. But in order to treat any of these problems intelligently he must have a certain number of facts. We have supplied in a small way some facts in propeller designs, to which I have been devoting the last year. The propeller of the present time is designed in very large measure upon mathematical and accidental methods and the result is in large measure that it is not as it ought to be. But we don't know how to be sure to obtain the highest efficiency. This whole line of work is for the purpose of cutting down the margin of uncertainty. There are also large numbers of other problems regarding the conditions in the phenomena of engineering parts—in torpedo boats, fast yachts, &c. New conditions were found to exist when the screw propeller was coupled up with the turbine in England. Other problems are to be taken up of which we have very little scientific data.

"In order to receive just treatment at the hands of the practical engineer, they must first receive a considerable amount of study at the hands of the scientific engineer, whose business it is to make a particular study of the conditions which are favorable for their contemplation, and to furnish matter which will enable the practicing engineer to know what will be the result of any use he may make of the facts deduced from them. It is not so much to design a propeller, for instance, but to furnish the data which will enable the engineer to see with some degree of assurance that, if he adopts certain proportions, the result will be so and so. It is left to his judgment. The Government tanks and nearly all private tanks are for the most part occupied with commercial problems. They study problems having something to do with certain immediate solutions for a particular ship, a particular propeller, &c. The information gained at all these tanks is locked up, and the public never sees it. It is for the benefit of Government design, and not for the advancement of general engineering science. It costs large amounts of money for the solutions of these problems, and even the private institutions could not afford to give forth immediately the data for the benefit of their rivals. Therefore, the private engineer is often at a loss when confronted with any great problem, and heretofore he has had no one to turn to for assistance out of his difficulty. It is this assistance denied by Governments that we hope to supply."

Doubtless many of the problems referred to by Prof. Durand have been solved by the several Governments possessing experimental tanks. This is quite within the limit of possibility; but whatever facts have been obtained probably will not be exploited until the looked-for critical moment is at hand. In fact, if all these secrets are really as important as they are reported to be, some wonderful accomplishments may be expected alike from the warships and the merchant vessels of the future.

THE GREGORY MEMORIAL FUND.

A Novel Entertainment Projected by the Barnard Botanical Club.

Not very long after the death of Dr. Emily L. Gregory, professor of botany in Barnard College, her students organized themselves into an association called the Barnard Botanical Club and decided to provide a suitable memorial of her in Barnard College. The annual dues of the club, after the current expenses have been paid, are devoted to this object and form a nucleus for a fund. Persons not members of the club, but interested in its object, may contribute to the memorial. Of course, it was never the design of the members to raise the fund from the annual dues alone, and they have now hit upon a plan which they hope will add a large sum to it. Just what form the memorial shall take will depend upon how successful the present scheme proves. If $3,000 is raised undoubtedly the memorial will be a scholarship in the botanical department of Barnard College.

As several of Dr. Gregory's old pupils are now teaching in Mlle. Veltin's school, the use of that building has been offered and accepted for an entertainment that is quite novel in its conception, and, if its financial success is at all commensurate with its artistic success, its projectors think they are none too optimistic when they prophesy the completion of the necessary amount, $3,000. The printed announcements say: "A Flemish Flower Fête and Reception will be held under the auspices of the Barnard Botanical Club in aid of the Gregory Memorial Fund." Among the patronesses are Mrs. Seth Low, Dean Smith, Mrs. Anderson, Miss Helen Gould, Mrs. Choate, Mrs. Kinnicutt, Mrs. Henry Osborne, and Mrs. Schuyler Van Rensselaer. The announcements further contain this historical fragment, which serves as an introduction to the real character of the entertainment:

"Margaret of Lille was a woman of observation and forethought, and threw open her château to men of learning and letters. Indeed, so great was her admiration for the beautiful books illuminated by the monks, that she mastered the difficult art of reading that she might enjoy their contents, and, having found much pleasure in the perusal of these books, she determined to endow a school where others could gain the same enviable power. To gain funds for and interest other people in this school she opened the spacious loggia of the château that overlooked the square of St. Hildric, and converted it into a flower market, where she offered for sale the choicest blossoms from the gardens of Utopia. To make the sale more successful she condescended to be present with her ladies and jesters, troubadours and squires, while the daughters of the townsfolk and the nuns sold the flowers. My Lord of Lille, who cared very little for the school, was, however, quite unwilling that so fine an opportunity for display should escape him. He therefore gave his horses and falcons a rest, and with his friends and retainers donned his gala attire and joined the ladies in the loggia."

The programme adds: "The Chatelaine will open the sale at 3 P. M. and 8 P. M. The Count and his men will enter the loggia at 3:30 and 8:30 P. M. The flowers are all for sale, and each blossom represents a certain blessing to be bestowed upon some deserving scholar, and the Chatelaine requests you to make a purchase." Then follows a benedicite upon all those who respond to the invitation. The date of the entertainment is April 14, just after the Lenten season of retirement and meditation, when every truly penitential person is eager to put into immediate practice her altruistic devotion. Flowers in themselves are in such demand that it is never difficult to find purchasers, but the projected entertainment promises much that is both pictorial and novel, and novelty seems to be the one thing that the New York public is always seeking.

Thoughtful of the Children.

"Speaking of people giving up their seats in the cars," said a man, "twice lately I have seen men of mature years who were comfortably seated in an end seat in the last car of an elevated train get up and change their seat so that a child that had just come in could have the end seat and look back along the road, which all children like to do."

STRAWBERRIES IN MARCH.

AN INDUSTRY THAT IS GROWING RAPIDLY IN LOUISIANA.

Fruit Raised in the Piney Woods of the South for Early Northern Consumption—Crickets, Quails and Mocking Birds Some of the Farmers' Enemies—Profits of the Crop.

HAMMOND, La., March 21.—March strawberries are not so rare as they once were, and the indications are that they will be even more plentiful in a few years. Ten men are now raising strawberries in this section for one man who was raising them ten years ago. Strawberries to the value of thousands and thousands of dollars go out of this little town during the months of March and April, and there are plenty of acres of piney woods which will in a few years be sending a berry crop to the North.

The North grows more luxurious, more epicurean in its tastes with every passing year. The South does, too, but it is satisfied to follow a good way behind the North. With the chance at its very doors of having fresh vegetables all the year round, the South eats canned goods and lets its land lie idle, except, of course, in certain localities, where people—often Northerners—have devoted themselves to creating a supply for the Northern markets.

New York, Chicago, Boston, and the other Northern cities demand strawberries in December, and they get them. Even the shippers in the South, however, admit that the early winter berries are tasteless and undesirable. They say here that good berries, those having the true flavor, cannot be shipped earlier than the first of March. The shipping season is, therefore, fairly under way here now. During the next six weeks thousands of crates of berries will go North from here. Then, at the beginning of May, it will be Tennessee's turn, and very soon afterward the North will eat its own berries and ask no odds of anybody.

At present the principal orders come from the clubs, hotels, and railroads. The Southern railroads buy early berries to supply their eating-houses, especially those pretty well toward the North. It is always a stroke of policy to offer the traveller from "the frozen North" a dish of strawberries and cream at his first breakfast south of the Ohio River. It contributes to the traditions—sometimes rather obscured by actual experiences—of the Sunny South. The strawberry culture of this section, the most successful in the Middle South, is still to a certain degree in the experimental stage, and yet it has already established itself on certain fixed lines.

This is the kind of country which is known throughout the South as piney woods country. Ask a farmer what is the nature of the soil, and he will shrug his shoulders and say:

"Oh, well, just piney woods soil."

Pin him down, however, or explore for yourself, and you will find that there is a subsoil of clay with a surface stratum of varying depth, averaging perhaps a few inches, of sandy loam. The subsoil of clay is desirable, because it keeps the fertilizer from leaching off, and also retains the moisture, of which strawberries need a great deal.

If the uninformed observer should see a tract of land covered with stately pines, and should be informed that the next year he might eat strawberries from that very piece of ground, he would be inclined to shake his head. Nevertheless such might easily be the case. The trees, of course, can be cut and hauled off quickly. The green stumps are burned out. Then the land is ploughed up. One of the most successful and progressive berry farmers of this locality says that he always gives his land four ploughings. He ploughs it both ways the first time. Then he goes over it in both directions with a disk harrow. Then he covers it with barnyard fertilizer.

Next comes one of the most important steps, in his estimation, in the preparation of ground for a strawberry patch. He plants the field with cowpeas. These grow rapidly, protect the soil from the rain so that the earth does not pack down hard, and they also supply the nitrogen needed by the strawberries. In September, having cut and put away this crop of cowpeas for hay for the cattle, he turns the cows into the patch and lets them eat what is left on the ground. At the same time he begins to plough it up, turning the remains of the cowpeas crop under, where they decay and act as an excellent fertilizer.

Having ploughed and harrowed the patch both ways again, he ridges it up as if to put in the plants at once. Instead of that he takes his plough again, sets it in the very middle of a ridge, and, as he says, bursts it open right down the middle from one end to another. Then he drills fertilizer into this furrow and ridges it up once more. Finally he puts in his plants. His work is only just begun then, for next he must scatter potash around the plant, must fight the crab grass which will take possession of a row, must scrape off the winter weeds, must put on Bordeaux mixture to destroy "rust," and, finally, must mulch the patch.

Mulching is a local piney woods expression for a local performance. Mulch is the name applied to the brown pine needles of uncommon length which fall from the trees here. They are clean and do not rot quickly. Hence they are used to serve a purpose which will appeal to every lover of a strawberry. They are first strewed all along the ridge, then the workman goes back, and, taking the leaves of each plant, he carefully lifts the whole growth and puts the mulch loosely around the central stem, so that leaves and berries are kept up out of the sand and dirt. The first good rain washes off the dirt which may have accumulated, and it runs down through the loose needles. Evidently, after that, no sand can get on the berries. They are free from any dirt, except what dust may settle on them from the air.

From the first to the middle of May is considered the end of the shipping season here. Not that there are no more berries. On the contrary, there are more than ever. But there is no market for them. They cannot be shipped North because of the competition with producers nearer the markets. Then the energetic farmer ploughs up all of his patches except about half an acre of plants. From this half acre he can get enough runners to set out more acres than any man would like to manage. Every year tons of berries are ploughed up so that a furrow almost runs red with the juice. Some strawberry wine is made, but there is no market for the berries.

It is better economy, therefore, to turn them under and put in a crop of something else. For instance, the ground can be ploughed up and corn planted. When this grows up the inevitable cowpeas can be planted right in with the corn, so that in September the thrifty farmer gathers his crop of corn and his crop of hay, which, moreover, has helped to fertilize his land for another inning with berries.

The berries are not planted all at one time. The autumn is a dry season and the farmer has to take advantage of the rains as they come. If there is a black cloud, you will see the farmer hustling around to get ready for setting out. After the rain he goes on putting in the plants until the soil begins to feel dry to his fingers, then he stops and waits for another rain. In the meantime he may be obliged to water the plants he has already put in. In this way his planting may string along until in December, but he ought to be all through by Christmas.

Northern epicures are not the only creatures that appreciate March and April strawberries. There are the crickets to begin with. They nibble at the berries, ruining many a fine one, and if that one is packed in a box with others it will leak its juices slowly over its neighbors, softening them, until a whole box is practically spoiled. The quail, too, is a gourmand of berries. He sticks his beak into the fruit until he is literally up to his eyes in the berry. When you kill a quail that has been feeding on berries the juice will be found to have dried in a perfect frill around his beak just below the eyes. The mocking bird is another partaker in the strawberry patch.

"Oh, law!" said one farmer. "Those mocking birds are enough to drive you crazy. They not only eat the fruit, but they sit there and sass you back if you tell them to go away. If you throw a stick at them, they'll move up the row a little way and then turn around and just sass you as long as they feel like it."

Many farmers, at the end of the season, set fire to the mulch on the patch which they intend to keep for holdovers. It burns right along the row, killing all the crickets and insects. Of course it also burns the leaves and fruit, but the plant itself is uninjured and is the better for it.

Some of the farmers here, and they are also the shippers, have adopted the plan of dividing their berries into "selects" and "No. 2." The fancy berries are thus made more satisfactory, because they run more evenly. The farmer does not lose by it, for experience has proved that his fruit is in better demand thereby, and also that his No. 2 berries often bring just as good a price as the fancy ones. He explains this by the circumstance that the smaller but perfect berries are really worth more to the boarding-house keeper or the landlord of an ordinary hotel. Perhaps fifteen dishes can be got from ten pints of selects—this is the farmer's calculation—while thirty dishes could be got from the same quantity of No. 2 berries.

During the picking season the little darkies (who swarm in this locality so that sometimes you can hardly see their cabins because of the clouds of pickaninnies) get out and do some of the small amount of work which they accomplish in their lifetime. They pick berries at a cent a box. These are taken to the packing shed, where they are turned out onto a wide and long table, covered with old flannel. The flannel is softer than boards, keeps the berries from rolling, and its nap acts as a brush to remove the dust. An experienced packer seems to sort out the berries almost with a wave of his hands, so quickly does he pick out the knotted, shrivelled, over-ripe and half-eaten ones. Then, at least here, he separates the smaller for the No. 2 grade and the larger for the selects, topping off each box with especially fine specimens, as has been the way of fruit packers from time immemorial. A berry which is in its prime when picked here is not a fit berry for shipment to the North. Those which have just begun to blush are the best. Formerly the fruit growers in this part of the South had to send their berries in regular express cars. The man who was unlucky enough to have his fruit put next to the stove lost it as a matter of course; while the man whose crates were too far from the stove was liable to lose his by having it nipped by Northern cold. Now there are refrigerator cars for the benefit of the strawberry grower in the South and the strawberry eater in the North.

It is not likely that one man in a hundred who gets March strawberries as a special treat in his bill of fare knows of all the thought and labor that have gone into the production of the fruit. Everybody that has worked with them here admits that they are a crop requiring lots of care; but whether or not the care pays may be decided from the fact that the successful and progressive producers make as much as $300 an acre. At any rate, these piney woods are being cleared and strawberry plants put in with a rapidity which promises well for future givers of March luncheons and dinners.

THE UMBRELLA INDUSTRY.

Yearly Sales in This Country of a Value Exceeding $25,000,000 at Retail.

More than one-half of the umbrellas used in this country are produced in Philadelphia, and the distinction of the Quaker City in this respect is no new thing, for it has passed almost into a proverb throughout the United States that "when the Quakers come to town it is going to rain." Very few persons have any correct idea of the extent of the umbrella business in the United States. It amounts in a year, taking the retail figures, to $25,000,000. There are in this country 500 umbrella factories having an invested capital of $6,000,000, of which more than $3,000,000 is in the city of Philadelphia alone. New York, Massachusetts, Maryland, and Ohio are the other States which are largely represented in the manufacture of umbrellas, while all the States are represented, though unevenly, in their sale.

For many years some of the best umbrellas were imported from abroad, especially from England, and the rate of duty upon them prior to 1890 was 50 per cent. ad valorem if covered with silk or alpaca and 40 per cent. if covered with any other material, cotton or linen included. Under the tariff of 1890—the McKinley bill, so called—American umbrella manufacturers were favored by an increase in the duty of 5 per cent., the rate upon silk and alpaca covered umbrellas being 55 per cent. and on those covered with other material 45 per cent. Since then the importations of English umbrellas have declined, though this change is not to be ascribed wholly to the workings of the tariff, but rather to the fact that American-made umbrellas are decidedly cheaper and quite as serviceable as those imported from other countries. Moreover, they have the additional advantage of being lighter and less cumbersome, and are not constructed to meet the requirements of hard and continuous usage, as is the general custom abroad; for the number of those who always carry umbrellas is materially larger on the other side than it is here. The American plan is to carry umbrellas only when it is raining or seems likely to rain, and it is a matter of common observation in American cities that there are more men who neglect, omit, or are unable to get umbrellas on rainy days than there are men who carry umbrellas when the weather is fair. This condition is exactly reversed in most European cities, where it is no uncommon thing to see many umbrellas carried on a bright, clear day. The average rainfall in inches is 25 in London, 23 in Paris, 24 in Berlin, 20 in Vienna, 17 in St. Petersburg, and 44 in Glasgow. The average in New York is about 40 inches, but the number of days in which there is some rain is larger abroad than it is here.

There are in the United States more than 8,000 persons (the larger number of them men) engaged in umbrella manufacture, and the total wages paid in a year in this branch of American industry exceeds $4,000,000. What peculiar merit the city of Philadelphia offers to umbrella makers is not easily stated. The materials which enter into umbrella manufacture are not procurable with any unusual advantage in Philadelphia and the chief market of sale is New York.

A NEW SPECIALTY CLUB.

Standard and Points Announced by the Irish Terrier Breeders of America.

Although organized only in 1897, the Irish Terrier Club of America has gained a foremost place among organizations devoted to special breeds of thoroughbred dogs. The breeding here of the hardy and vivacious Irish terrier has been hampered by the lack of an organized body to promote the interests of the breed. There has been an uncertainty regarding the proper standard of judging, and at our bench shows the latest importation has usually received the benefit of the doubt and won the prize. The new club, to remedy this state of things, has settled on the following scale of points for judging Irish terriers:

Positive Points—Head, ears, and expression, 20; legs and feet, 15; neck, 5; shoulders and chest, 10; back and loin, 5; hindquarters and stern, 10; coat, 15; color, 10; size and symmetry, 10. Total, 100.

Negative Points—White nails, toes, and feet, minus 10; much white on chest, minus 10; dark shadings on face, minus 5; mouth undershot or cankered, minus 10; coat shaggy, curly, or soft, minus 10; uneven in color, minus 5. Total, 50.

In the club's description of the particular points it is stated that no cropped Irish terrier born since March 1, 1897, can compete for any of the club's prizes. This is an indorsement of the stand taken about terriers and other breeds by the English Kennel Club and in force since 1895 at bench shows in Great Britain. The American Kennel Club has waived action on the point, leaving it optional for bench shows to offer prizes for dogs with each type of ear, and to the specialty clubs to decide whether clipped ears shall be tolerated by their standards or not. On humane principles the action of the new Irish Terrier Club will be generally commended, for while it is conceded that when chloroform is used and the operation performed by a veterinary surgeon clipping is not a cruelty, to make the act a disqualification is an assurance that in no case will a dog suffer pain at the hands of bunglers. The proper ear, according to the standard, must be small and V-shaped, of moderate thickness, set well on the head, and dropping forward closely to the cheek. The ear must be free of fringe, and the hair thereon shorter and darker in color than the body.

The coat must be hard and wiry, free of softness or silkiness, not long enough to hide the outlines of the body, particularly in the hindquarters, and free of lock or curl. The terriers should be whole-colored, the best colors being bright red, plain red, wheaten or yellow red. White sometimes appears on the chest and feet. It is not as objectionable on the chest as on the feet, as a speck of white on the chest is often seen in all self-colored breeds. Hair on the face must be of the same description as on body, but short and in appearance almost smooth and straight. A slight beard is the only longish hair (in comparison with the rest) that is permissible, and that is a characteristic. The nose must be black, the eyes a dark hazel, small but full of fire, and the jaw strong and muscular, but not too full in the cheek. There should be a slight falling away under the eye, so as not to have a greyhound appearance.

The most desirable weight in show condition is twenty-four pounds for a dog and twenty-two pounds for a bitch. In character the terrier must present an active, lithe, lively, and wiry appearance and lots of substance, without clumsiness, as speed and endurance are as essential as power. The breed is remarkably good-tempered to mankind, but even the club's expert admits that it is perhaps a little too ready to resent interference on the part of other dogs. It is the heedless, reckless pluck of the Irish terrier, coupled with the headlong dash, blind to all consequences, with which he rushes at his adversary, that has earned for the breed the proud epithet of "The Dare Devils."

The club has opened six annual stakes, for which entries close on Jan. 31 of each year. They are for terriers owned by the members, and will be judged at some of the principal shows each year. In two stakes the winners secure the custody for the year of the Grand Challenge Cup and 50 per cent. of the entrance money, 30 per cent. going to the second and 20 per cent. to the third. In the four other stakes there is but one prize, each winner taking a silver cup and the total amount of the entry fees. Oliver Ames of Boston is President of the Irish Terrier Club, W. L. Beadleston of New York is Vice-President, S. D. Parker of Boston is Treasurer, and O. W. Donner of Milton, Mass., is Secretary. Singleton Van Schaick of Cold Spring Harbor, L. I., is the delegate to the American Kennel Club. The membership is about fifty, and includes in the New York contingent James L. Kernochan, Edward Kelly, W. W. Caswell, H. L. Camman, W. A. Thomson, and B. L. Sackett. At the Boston and New York shows last month the Irish terriers were the best seen in this country as a class, an effect of the fostering work of the new club. Three stakes were decided at New York and two at Boston. At the Westminster show Oliver Ames's Tory won the Grand Challenge Cup for dogs, and the same owner's Rum took the similar prize for bitches, while G. Gordon Hammill's Hilltop Nora won the Home-Bred Puppy Stakes. The same bitch won the Vixen Stakes at Boston, and Oliver Ames's Bristol Moses captured the "Daredevil" Stakes. They are the first winners on the roll of honor established by the new club.

Two Men with a Sense of Humor.

Scene, outside a North River ferry house, on a rainy day. Approaching, a foreigner, carrying in one hand one of the valises that are unmistakably foreign, and with the other leading by a rope a small dog, which drooped all around in the rain.

"Going to drown him?" asked a cabman.

"No," said the foreigner, "Klondike."

GHOSTS FAR UNDER WATER

STRANGE THINGS SEEN BY DIVERS IN THE GREAT LAKES.

Wrecks at the Bottom That Look Spectral and Weird—An Encounter with a Dead Man—Peculiarities of Lake Huron—Ever Present Dangers—Fascination of the Calling.

"In spite of the fact that no deep-water lake diver ever goes down without feeling that the chance is by no means remote that he has looked for the last time on the sky and the earth and all he loves," said one who was formerly engaged in that perilous calling, "there is a fascination about the life that few divers, after becoming familiar with it, have ever been able to resist. This seems the more singular because no diver, shut up in armor and held down in the depths by a hundred pounds or more of weights, can ever banish entirely the thought that a little stoppage of the air pump, a leak in his hose, or some slight carelessness on the part of his tender in the boat above, is sufficient to bring down upon him the weight of a mountain and crush the life out of him as in the twinkling of an eye. There is always danger, too, of the diver fouling his life-line himself by catching it on some projecting splinter, or around a sharp-edged timber, and in his haste to release it he may precipitate the catastrophe of which he stands the most in dread. The fouling of a line frequently occurs, and I never had it occur to me—as it did more times than I care to recall—that I did not turn cold in my efforts to release it at the thought of what a slender thing held back the clutch of death down in those moaning depths.

"There is no sound down there but the intermittent wail and moan, wail and moan, of the swaying waters all around and above, and yet seeming far away. There are no waves in those depths, only a mysterious swelling and swaying of the waters. Foundering vessels on the lakes, especially sailing vessels, frequently sink so squarely that the diver who goes down to work in them finds them resting on the bottom as trim and neat as if they were still ploughing the surface. It is a weird and startling sight to come suddenly upon a full-rigged vessel far down in the solemn depths of the lake, standing erect on her keel, as if she were dashing away before the breeze in the sunlight and freedom of the lake above. It is a sight uncanny and ghostlike. The moaning sway and swell of the waters gives a see-saw-ing tossing motion to the spectral craft, which is all the more spectral because there is no creak of timber, no sound of straining ropes or grinding keel. The diver might climb the rigging, walk the deck, or go down into the sunken cabin as readily and easily as if he were a sailor and the vessel were sailing along with only the sky above her—but he can't help the intruding thoughts of death. The lake diver would much rather find a sunken vessel a wreck indeed. He naturally expects to find a broken ruin on the bottom of the lake, not the ghost of a perfect ship. He can work and search with better cheer among splintered beams and shattered spars and broken keels, where he has to chop and pry and batter down to uncover the object of his quest, whether it be merchandise, treasure, or corpses, than he can on a sunken craft that gives him free and easy access.

"This spooky situation of a foundered vessel standing erect on the bottom is more apt to occur in Lake Huron than in any other of the great lakes. What the scientific explanation of the fact is I don't know, but a diver can work on the bottom of Lake Huron at a depth of at least twenty feet greater than he can in any of the other lakes. In Lake Superior a diver can't see further than ten feet into the water surrounding him, but in Lake Huron he can plainly distinguish objects fifty feet away. At a depth of 100 feet in Lake Superior a diver can work not more than one hour at a time, the feeling of oppression becoming then unbearably painful, but I have worked five hours at a stretch in Lake Huron 115 feet below the surface before the pressure forced me to signal to be hauled up. A man drowned in Lake Superior never appears on the surface. The dead float on the waters of Lake Huron, and yet all the water of that lake comes from Superior.

"I have gone down to the lake bottoms many times engaged purposely to release the bodies of men, women and children who were known to have perished in wrecked vessels, and I early became insensible to any shock, feeling of horror or even uneasiness in searching among sunken wrecks for corpses. But there came a time when I could not go down simply to recover goods or valuables, no one having been carried to the bottom with the vessel, without being constantly haunted by the dread that some dead person would rise suddenly from some part of the wreck and confront me or that corpses were floating in the water above or around me. That feeling came to be a part of my work from an experience I had on a wreck not long after I became a diver. It occurred in Lake Huron. I had gone down to recover a valuable cargo from a vessel that had foundered so suddenly that the Captain and crew had barely time to escape by the boats. The wreck lay in ninety feet of water. It was badly broken up and rocked and swayed in the water so that I kept my balance with difficulty as I worked among the timbers. I was prying and chopping my way to the hatches when from some place about the wreck, but from just where I never could tell, a dead man rose suddenly in front of me.

"The corpse was not more than ten feet away, erect in the water, facing me, and seemed to me exactly as if it had risen in alarm at my approach. The man had died with both hands tightly clutching his breast. His open mouth, widely staring eyes, and distorted face made such a picture of horror as I hope never to see again. The corpse stood a second facing me, and it seemed to me as if its horror was of me and because of my presence there. I stood as if paralyzed, such was my terror. The dead man rose at last toward the surface and in such a way that it deepened the impression that I had disturbed him in his sepulchre, for it was for all the world as if he were fleeing from me. Several times before the corpse disappeared beyond the line of my vision it turned in the water and seemed to gaze back at me with that haunting look of horror, the hands still clutching the breast. After the body had gone out of sight I tried to proceed with my work, but I was so much unstrung that a fish swimming by or the air hose flapping against me gave me such painful starts that I had to be signalled to be hauled to the surface, and it was a long time before I could summon courage to go down again. Never after that could I go down a hatchway into the cabin of a sunken vessel at such times without shuddering over the thought that perhaps some poor victim of the wreck was imprisoned there, and that he would suddenly be released by the lurchings of the hulk and appear to me in all his swollen, wild-eyed horror, notwithstanding that all the time I followed diving after my first startling experience I never came again face to face with an unexpected corpse. The one I encountered on that occasion must have been the corpse of an unfortunate stowaway, for none of the crew knew the dead man nor of his presence on the vessel.

"Lake divers get big pay for their work, but as there are a good many in the business, and jobs are sometimes far between, they do well if they average more than fair wages, taking the year through. I have made as much as $1,000 in a month, but there were a good many months during which I did not make a dollar. Full of peril as the life of a lake diver is, it is safety itself in comparison with the life of a lake sailor. I would rather take my chances, nine times out of ten, in going to the bottom and working there among the ever-present dangers that beset the diver than to sail before the mast on the great lakes. I didn't quit the life of a diver because of its perils or its hardships. I followed the calling ten years, and after escaping with my life by the narrowest chance from threatening and imminent dangers on the uncanny bottom of the lake, fathoms and fathoms down in the subterranean gloom, I was compelled to abandon diving by an accident that happened to me in the full light of day and while breathing the free air of heaven, with no sign of danger nigh. I was preparing to go down to search a wreck off Toledo. Before I was ready to descend a heavy chain fell from the derrick of the wrecking scow I was on, just missing my head and striking me on the right shoulder, crushing every bone in it. The accident crippled me so that I was unfitted to resume work as a diver and I reluctantly abandoned the profession that had so much fascination for me. The diver who went down in my place on that wreck having been down long beyond the time it was possible for any one to remain in that water, the men above hauled him up. He was dead, his lifeline having been cut by a jagged piece of iron on the hull. I don't know whether that might have happened to me or not if the chain hadn't fallen upon me and prevented my going down. Perhaps it might."

The Hairpins Seen on the Sidewalk.

"It seems to me," said a man who has occasion to go about town a good deal, "that there is no part of the city in which one may not come across lost hairpins. One may see them lying on the sidewalk in Fifth avenue and in remote side streets alike. The first impression that one gets from these scattered hairpins is of the common use of the hairpin. The common kinds of hairpins such as are seen lying about in this manner must be made and sold in tons. And the next impression from them, that a man gets, anyway, must be of the number that a woman carries in her hair. For though he sees so many hairpins scattered about he doesn't meet women with their hair hanging loose. Their hair is fastened with so many that they don't miss one."

A CHINATOWN JANITOR.

She's Fourteen Years Old and She Takes Care of the Mission.

"Are all of these trappings hung out for a parade? Is anything out of the common going on?" asked one of a sight-seeing party in Mott street the other afternoon.

"No, this is Chinatown's habitual aspect," replied the pilot, "only it being Sunday the street is more crowded than usual."

He led the way among the motley crew of Chinamen, negroes, and Italians massed so thick as to resemble a mob, except that there was no noise or confusion. A certain little girl, Helen by name, dressed in a dainty velvet coat and picture hat, kept fast hold of her father's hand, and stared about her as if half afraid of it all.

"It's so queer, so different down here, I don't wonder she's frightened," some one remarked.

The crowd in the middle of the street gave way before a trio of open, empty carriages, apparently all making for the same goal, driven by coachmen in beavers, and every one drawn by sleek white horses with flowing manes and tails. Helen, her father, and one of the women of the party took refuge in a recessed doorway until the excitement should subside and the crowd surge back to the middle of the street. From this point of vantage they had a good view of the green and gilt panelling on the opposite houses, the banners all littered over with Chinese characters and the bizarre decorations on the balconies. The white horses and carriages passing through the crowded thoroughfare beneath this array afforded an odd, un-American spectacle.

"Are those carriages for a funeral or a wedding?" was asked of a woman standing in the door. She stared blankly and shook her head as not understanding, but a bareheaded, bright-faced little Italian girl in a print frock and white apron, spoke up promptly:

"It's only the people up at the corner house yonder going out riding," she said. "They mostly goes on Sunday afternoon."

"Then the white horses don't mean anything?" said the questioner, smiling at her encouragingly.

"No. No more than they look fine with the black carriage."

The child jangled a bunch of big brass keys in one small hand as she spoke, and her large eyes, dark and glowing, roved over the length and breadth of Helen's costume, from the soft, rich plumes in her velvet hat to the hem of garnet that showed beneath her coat and her daintily shod feet.

"I live in Centre street," she of the print frock said, in response to further question, "but I come here every day. I'm the janitor."

"The janitor! you!" exclaimed the gentleman. "You mean your father is the janitor and you help him."

"No, I'm the janitor," said the child. "I've had the place four months," and she shook the keys convincingly. "Have you come to the Mission?" she asked as if having gained courage from the pleasant manner of the strangers.

"No," said the spokesman of the party, "but these ladies and this little girl had never seen Chinatown, and I brought them to look at it."

"Well, I was going to say that you can't go in the Mission now, not till the Chinese women are through. They don't like it, Miss B. says."

"Where is the Mission?" she was asked.

"Up in this house. That's what I am the janitor of. I keep the keys and scrub up the place and keep it nice and the windows all washed."

"How old are you?" asked Helen, interested sufficiently to forget constraint.

"I was 14 last month."

"Why, that's my age; and you know how to be a janitor?" Helen was plainly impressed.

The curly head nodded. "I've learned how. Two or three girls I know do job work at scrubbing and make a good deal that way. I set the table and make tea and get things ready for the Mission people when they've got through with one service and are going off to hold another. Oh! Miss B.'s done lots of good. Some of the Chinese women she's taught has gone back to their own country to save people out there. They sing beautiful at the Mission in my street. I was the first child Miss B. knew when she came downtown to work."

"What does your father do?" one of the ladies asked her. But a shadow dimmed the brave dark eyes as the answer "He stays home mostly," was followed up by the disclosure that her mother was sick, and there were four children of them, she the next oldest to her brother, who worked in a store. A thick-set American, in a dun-colored suit and derby hat, passed out of the house door, and the janitor said that he was one of the singers at the Mission, and that the meeting would be out now in a minute or two.

"Then I'll go up and straighten up the room for the evening meeting while the teachers are gone off 'round to the Mulberry Street Mission," she added.

"Oh! well, then, we can see the Chinese women come out from the meeting!" put in a sightseer. "That will be lovely!" But the janitor clanged the brass keys negatively.

"The women won't come out—at least, not now," she said.

"Not come out? Why, where do they go?"

"Three or four of 'em what's learning the English religion lives up above in this same house, and some of the others live in the next house. They can get into that without coming out into the street. I think there's only two lives outside, and they will wait until the crowd is out of the street, and it's dark, to go home. You know it's against their belief for a Chinese woman to walk about before people, same as other women do. They believe in Joss and burn sticks to him."

The party took leave of the little janitor and set out for a further tour of inspection to that part of the town where the white horses had gone. Helen held a whispered conference with her father when they were a few paces away and then let go of his hand, and ran back to the doorstep where the girl in the print frock stood looking after them wistfully.

"Father wants you to have this," she said hurriedly, slipping something into the small, roughened palm. "You were very polite to us. Good-by," and almost before the brown eyes could flash their astonishment and pleasure she had tripped off to where the party waited for her.

"Does that janitor girl have to stay down here after dark?" she asked as they walked on.

"Yes, I should think until about half after 9 or so," was the answer.

"Oh! how scared she must be!" said Helen, and she pressed close to her father's side and gave his hand a squeeze.

MAINE GUARDSMEN AT WORK.

Their Officers Learning Points of Mobilization and Service.

BANGOR, March 25.—There is great interest and activity among the men of the Maine National Guard just now, and all the talk at the sessions of the military school of instruction now in progress here bears upon the operations of land forces in a conflict, which most of the officers seem to expect. Two days have been spent in instructing the commissioned officers of the State soldiery as to what they should do in case of a sudden call to arms, how they would arrange for the movement of troops, how to treat wounded men at short notice, how to quell draft riots, and how to shoot straight. All the commissioned officers of the Second Regiment were in attendance, and the utmost enthusiasm was manifested.

Col. E. C. Farrington, State Inspector of Rifle Practice, was asked how the militia soldiers of the present time compared with the militia and citizen soldiery who went to the front in 1861-65, and he said that the State troops of to-day were far superior in every way to those of the time of the rebellion. When Col. Farrington first became connected with the National Guard of Maine, in 1880, only 15 per cent. of the guardsmen then enrolled had ever fired a rifle at any kind of a target, and only 7 per cent. were even fair marksmen. To-day 90 per cent. of the men are not only familiar with the use of the rifle, but they are all fine shots in the bargain. Col. Farrington declares that no militiamen in the country excel those of Maine as marksmen, and that few equal them.

As to physique, Col. Farrington says that the guardsmen of to-day are fully the equals, if not the superiors, of those who went into the rebellion in the Union armies. Some have expressed the fear that the guardsmen are too young and tender to stand active service, but Col. Farrington says that young men from 18 years up make the best soldiers, being more active and alert than older men, and recuperating more quickly from fatigue, wounds, or disease. Col. Farrington says that although the Maine guardsmen are not giants, but rather of medium size, that is all the better for them, as a big man is usually the first to tire on the march and also presents a big mark for the enemy.

The Maine guardsmen feel almost certain that there is to be a war, and their officers say that 95 per cent. of the men would be not only willing but anxious to take their guns and go.

Less Noise in the Streets.

In asphalt-paved streets the noise of traffic is materially reduced; here even wheels not rubber tired make practically no noise; the noise is confined to the clamping of the horses' feet; and this may be reduced, owing to the increasing use of shoes with rubber pads to give the horses a better foothold on asphalt. On streets paved with stone, but used largely for carriages, there is less noise, due to the now extensive and all the time increasing use of wheels with rubber tires. So, from various causes, not only is the noise in streets not devoted with practical exclusiveness to business traffic less than it formerly was, but the tendency in such streets is toward less and less noise.

THE OYSTER HOUSE'S WANE

DECLINE OF A CHARACTERISTIC NEW YORK RESTAURANT.

As Many Oysters Eaten as Ever, but the Manner of Consumption Changed—Effects of the Competition of Showy Restaurants and Hotels—The Rapid Oyster Opener Going, Too.

There are now in New York fewer oyster houses than there were ten or even twenty years ago, notwithstanding the fact that the wholesale trade in oysters has increased and the quality of the oysters is better than it has been for several years. On every business thoroughfare, and on some side streets, too, there were formerly stores for the sale of oysters, and the distinctive features of these places were: A large range in the rear, a counter for the opener of raw oysters, a number of well-polished tables, and at the entrance of the establishment a number of baskets upon which were printed signs calling attention to the quality or variety of the contents, as, for instance, "East Rivers," "Shrewsburys," "Cape Cods," "Rockaways," "Blue Points," "Saddle-rocks," and "Delaware Bays." The oyster connoisseur could tell at a glance before entering the restaurant which was the best variety to take, and the important thing in such establishments was not the embellishment of the place or the merit of the service, but the quality of the oysters furnished. New York city has always been the chief market for oysters, requiring, in fact, more than any other city in the world, one thousand million a year being the average consumption. New York has never been the great market of supply, for that distinction belongs to Baltimore, apparently by natural right, for the annual receipts of oysters in Baltimore in a year amount to twenty million bushels. All the large cities of the Atlantic seaboard, Baltimore, Philadelphia, New York, and Boston, have been large consumers of oysters, but New York has continued far in the lead.

The beginning of the decline of New York oyster houses, as such, dates from the establishment of more elaborate, more pretentious, more expensive, and more costly places uptown on Broadway and Sixth and Third avenues, at which the sale of oysters in any form is merely an incident of the trade done, the more profitable orders being for steaks, chops, game, salads, and lobsters. The old-fashioned oyster houses appealed chiefly to the patronage of men, and it was no uncommon thing for customers to refuse even the hospitality of the tables and get their oysters at the counter. When, however, the oyster houses became chop houses, too, and ordinary tables with table-cloths came into use, the opening counter was relegated to the rear, and women became, and have since continued to be, patrons of these establishments. Incidental to this change there is no longer any pretence of separating the varieties of oysters, the present distinction being the simple one of large oysters or small oysters, as the preference of the patron may be.

The oyster season, as traditionally fixed hereabouts, lasts only during the months in which there is an "r"—that is to say, from Sept. 1 until May 1. This left four months, May, June, July, and August, during which oysters were not in season, and it was the custom of some of the proprietors to close up their establishments for four months, while others, and the larger number, did so only for two, either June and July or July and August. The explanation of the closing was the familiar one "closed for repairs." There were no repairs, so far as any observant patron could discern, but while the place continued closed the rent of the place went on, and, as a consequence, the proprietor of an oyster house had to support himself for twelve months on the profits, if there were any, of a season of eight, and the same condition confronted a majority of those who worked for him. So long as store rents were low and, relatively, a small item in the maintenance of an oyster house, this made less difference, but since rents have increased at most eligible points in New York, the impracticability of maintaining the business for only eight months in the year led to the adoption of the new features which have entirely transformed it. Again, as the oyster connoisseurs have disappeared there has been a change in the taste for oysters which entirely overtaxes the resources of the old oyster houses. Such novelties in the line of orders as "crumb broils," "fries with bacon," "celery broils," "Boston box stews," and "Baltimore broils on toast," required more space, larger ranges, and better attendance.

Still another reason for the decline in the number of oyster houses of the old style is found in the increase of the dairies, where oysters are sold in considerable number, the patrons of which are, to a great extent, those who were in other years the chief reliance of the oyster houses. New York city has now more cheap restaurants than it had at any previous period, restaurants at which "American fare" is the feature of the bill and no intoxicants of any kind are sold. Many of the former patrons of oyster houses take their meals at these, and they find them better equipped, cheaper, supplied with great variety and withal, "quicker." Quickness, indeed, is the most characteristic feature of many of them.

The business of the oyster houses has been cut into also in an unexpected but serious way by the hotels. Formerly, while hotels in New York were, for the most part, run on the American plan, the dining room was for the service of the guests and guests only. With the introduction of the European plan, however, nearly all hotels now maintain public restaurants, and in many cases the patronage of such restaurants is very much larger from outside than from the hotel guests. Some of the hotels have tables d'hôte and serve either oysters or clams—the Little Neck clams being supplied when oysters are not in season—and still other hotels maintain separate cafés at which oysters are sold, and can usually be obtained under better conditions than in the minor oyster houses.

All these reasons have had the effect of gradually reducing the number of oyster houses in town, notwithstanding the fact that the consumption of oysters in this city is steadily upon the increase and that New York is now as much of a market for them as it ever was. These changes have been of importance to certain men who seem now likely to have successors—the rapid oyster openers. During the busy season the chief oyster opener at an establishment where the sale of oysters was large commanded a good salary, sometimes as high as $25 or $30 a week, and his speed and dexterity made him worth the money to the proprietor. For many years there was a controversy which was never satisfactorily settled, whether it was best to serve oysters on the deep or the shallow shell. The conformation of oysters is such that it is easier to open them on the shallow than on the deep shell, and the preference of openers was, therefore, to save time and work by doing this. The obdurate connoisseur, however, insisted that the juice of oysters was to be found on the deep shell and that they were most palatable when opened in the latter way. The matter was long in dispute and was never settled, and now, probably, the time for settlement has passed, for stewed, steamed, broiled, fried or roasted oysters are opened in "any old way"—the patron being none the wiser. In the days of the old oyster houses in New York there were contests of skill in opening among the experts, and the official record of opening 100 oysters is 3 minutes 3¼ seconds. It was made by a Philadelphian. The record of opening 500 oysters is 26 minutes 18 seconds, and the record of opening 1,000 oysters is held by a New York man, who did it in 45 minutes. New York also has the pennant, so to speak, for clam opening. In thirty minutes the champion New York clam opener opened 459 clams.

ENTERPRISES IN ALASKA.

The Company Mr. Purdy Has Organized for General Business.

TACOMA, Wash., March 24.—Vice-President W. G. Purdy of the Chicago and Rock Island Railroad has organized the Purdy Yukon Trading and Transportation Company, with large financial backing to carry on a transportation, trading and banking business in the gold fields of Alaska. Associated with him are his sons, W. A. and W. F. Purdy, Gen. H. A. Wheeler, Commander of the Illinois National Guard; J. Able, the Chicago distiller, and C. P. Morse. The Western headquarters have been established here.

A 2,500-ton steamer has been purchased in New York to ply on the Tacoma-St. Michael route beginning in June. A shipload of material has been purchased and will soon be despatched to a bay near St. Michael, where three Yukon River steamers and several barges will be built. An ocean tug has been purchased in San Francisco.

John Ross, an expert navigator, who has spent four months exploring the Copper River and its delta, has found that light-draught steamers can be operated between Copper River City and the rapids, seventy-four miles up. These can be ascended by small powerful stern wheelers, after which there is uninterrupted navigation for 230 miles further. The Purdy Company will be the first to operate boats on the Copper River.

"They Live in a House."

There are flats that rent for as much as houses do; some that rent for far more than many houses; but most flats rent for less than houses, and where this is true there is no doubt a certain degree of distinction in living in a house. The difference is perhaps taken note of more by children than by adults; but it may be that parents living in flats ask of their children about children of their acquaintance, "Do they live in a house or a flat?" and this though so many thousands of the city's population are now housed in flats.

"They live in a house" is a simple and yet curious modern phrase, with a simple enough and yet interesting significance.